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10/736,029

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| EXAMINER |
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PATEL, HEMANT SHANTILAL

| ART UNIT | PAPER NUMBER |
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02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/736,029 | Applicant(s) CREAMER ET AL. | |
| | Examiner Hemant Patel | Art Unit 2614 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 7, 14 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 5, 12, 18 are objected to because of the following informalities: These claims do not end with "." MPEP 608.01(m) [R-3] "Form of Claims" indicates "Each claim begins with a capital letter and ends with a period.". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-6, 8, 11-13, 15, 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Polcyn (US Patent No. 6,061,433).

Regarding claim 1, Polcyn teaches of a method of dynamically assigning a plurality of voice ports and arranging a plurality of menu choice prompting sequences for at least one application, comprising the steps of:

receiving a plurality of incoming calls (col. 4, ll. 34-52);

monitoring at least **one among** a recognition error rate for each menu option and execution path, *a success rate for completing a desired transaction and an associated origination number (col. 4, ll. 34-46; col. 5, ll. 39-col. 6, ll. 31; caller successfully retrieving savings account information or using a particular application over the time and*

associating it with customer through his/her telephone number i.e. home telephone number or office telephone number col. 5, ll. 56-67), and frequently used menu options (col. 6, ll. 24-32; savings account balance and checking account balance (in that order)); and

*in response to the monitoring step, rearranging at least **one of the menu choice prompting sequences among the plurality of menu choice prompting sequences** (col. 6, ll. 24-32, col. 7, ll. 6-16; rearranging to skip prompts for savings and checking account, further also for CD rate) and reassigning at least one voice port among the plurality of voice ports (Fig. 3, items 321-323; reassigning the caller line port to application providing different prompts with combination of information but leaving other ports regular application).*

Regarding claim 4, Polcyn further teaches of rearranging menu choice prompting sequences comprising the step of rearranging menu choice prompting sequences in real-time based on the recognition error rate and the frequently used menu options (col. 6, ll. 65-col. 7, ll. 16; rearrange the application and hence prompts based on recognition of successful repeated use of particular prompt option).

Regarding claim 5, Polcyn further teaches of re-assigning voice ports comprises the step of providing greater priority to at least one of the plurality of voice ports based on the success rate (Fig. 3, items 321-323; gives greater priority to and reassigns the caller line voice port for an application combining the savings and checking balance with different prompts based on caller successfully using particular prompts while leaving

other ports to an application individually prompting the caller for the option to get these balances).

Regarding claim 6, Polcyn further teaches of dynamically (automatically by system based on historical usage) assigning the plurality of voice ports (multiple calling line ports) and arranges the plurality of menu choice prompting sequences for an interactive voice response system having a plurality of applications (Figs. 1-3 and corresponding descriptions).

Regarding claim 8, Polcyn teaches of an interactive voice response system, comprising:

a plurality of voice ports (Fig. 1, item 101); and

a processor coupled to the voice ports in the interactive voice response system (col. 3, 41-62; IVR as known in the art contains processor that executes various applications to provide prompts and collect responses),
the processor programmed to:

receive a plurality of incoming calls (col. 4, ll. 34-52);

monitor at least **one among** a recognition error rate for each menu option and execution path, *a success rate for completing a desired transaction and an associated origination number (col. 4, ll. 34-46; col. 5, ll. 39-col. 6, ll. 31; caller successfully retrieving savings account information or using a particular application over the time and associating it with customer through his/her telephone number i.e. home telephone number or office telephone number col. 5,*

ll. 56-67), and frequently used menu options (col. 6, ll. 24-32; savings account balance and checking account balance (in that order));

*rearrange at least **one of** the menu choice prompting sequences among the plurality of menu choice prompting sequences (col. 6, ll. 24-32, col. 7, ll. 6-16; rearranging to skip prompts for savings and checking account, further also for CD rate) in response to monitoring at least **one among** the recognition error rate and the frequently used menu options (col. 6, ll. 24-32; savings account balance and checking account balance (in that order)); and*

re-assign at least one voice port among the plurality of voice ports in response to monitoring the success rate (Fig. 3, items 321-323; reassigns the caller line voice port to an application combining the savings and checking balance with different prompts while leaving other ports to an application individually prompting the caller for the option to get these balances).

Regarding claim 11, refer to rejections for claim 8 and claim 4.

Regarding claim 12, refer to rejections for claim 8 and claim 5.

Regarding claim 13, refer to rejections for claim 8 and claim 6.

Regarding claim 15, it recites a machine-readable storage with executable instructions causing machine to perform the steps substantially similar to the steps performed by the system as claimed in claim 8. Refer to rejection for claim 8.

Regarding claim 17, refer to rejections for claim 15 and claim 4.

Regarding claim 18, refer to rejections for claim 15 and claim 5.

Regarding claim 19, refer to rejections for claim 15 and claim 6.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polcyn as applied to claims 1, 8 above, and further in view of Malik (US Patent No. 6,463,130 B1).

Regarding claim 2, Polcyn does not teach of monitoring recognition error rate for each menu option and execution path.

However, in the same field of endeavor, Malik teaches of monitoring recognition error rate (error in recognizing correct answer) for each menu option and its execution path (Figs. 5A-5B, 6A-6F and their corresponding descriptions; for each prompt there is error limit exceeded check for correct answer recognition).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Polcyn to include error checking for each prompt and its execution path as taught by Malik so that "If the user enters an invalid number or waits too long, the system will ask him to try again later in step 694 when the number of allowable errors has been exceeded" (Malik, col. 9, ll. 3-5).

Regarding claim 9, refer to rejections for claim 8 and claim 2.

7. Claims 3, 10, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polcyn as applied to claims 1, 8, 15 above, and further in view of Benson (US Patent Application Publication No. 2002/0067821 A1).

Regarding claim 3, Polcyn teaches of monitoring callers completing the desired transaction with an application. Polcyn does not teach of monitoring the duration of a call or revenue from a given caller.

However, in the same field of endeavor, Benson teaches of monitoring revenue per call (i.e. caller), revenue against length of a call (duration of a call) and call disposition (i.e. success or failure) (Paragraphs 0009, 0012, 0038-0039).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Polcyn to monitor revenue per call (i.e. caller), revenue

against length of a call (duration of a call) and call disposition (i.e. success or failure) as taught by Benson so that "by looking at business statistics associated with a call, for example, the revenue associated with a call or the business purpose of call" "can acquire a unique insight into the call center operation" and modify "business processes to improve the call center operation" (Benson, Paragraph 0004).

Regarding claim 10, refer to rejections for claim 8 and claim 3.

Regarding claim 16, refer to rejections for claim 15 and claim 3.

Allowable Subject Matter

8. Claims objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7, 14, 20, further recite the functionality of assigning greater priority to voice ports using an application with a greater speech recognition success rate than other applications in the interactive voice response system.

The closest prior art of record Polcyn as applied above fails to teach this specific feature. The remaining prior art of record fail to teach or fairly suggest of substantially modifying Polcyn with this specific feature in order to arrive at the invention as claimed in detail by the applicant.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | |
|-------------------------|------------|
| US Patent No. 6,389,398 | Lustgarten |
| US Patent No. 6,405,170 | Phillips |
| US Patent No. 6,487,277 | Beyda |
| US Patent No. 6,810,111 | Hunter |
| US Patent No. 7,065,201 | Bushey |
| US Patent No. 7,076,049 | Bushey |
| US Patent No. 7,110,949 | Bushey |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemant Patel whose telephone number is 571-272-8620. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/736,029
Art Unit: 2614

Page 10

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Hemant Patel
Examiner
Art Unit 2614

HSP

H Patel

[Signature]
FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600